

ABSTRACT

Disclosed is a rigid annular valve structure comprised of individual green state discs having partial or complete passages formed therein. The series of green state discs are assembled in an axially aligned stack such that the partial passages of adjacent ones of the green state discs cooperate to collectively define a plurality of substantially radial device passageways for fluid flowing therethrough. The disc passages are formed in the discs prior to the assembly into the stack. The assembled green state discs are heated as a unit in order to simultaneously harden the individual green state discs and to fuse the individual green state discs together to form the rigid annular valve structure. After heating, the rigid annular valve structure may be machined to define interior and exterior peripheries and end faces such that the rigid annular valve structure is suitable for use in a valve assembly.